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ABSTRACT

This collection of abstracts is part of a continuing series providing information on recent doctoral dissertations. The 25 titles deal with a variety of topics, including the following: (1) reading comprehension and visual creativity: (2) family interaction and reading achievement in high school males: (3) conceptual tempo, Piagetian level of cognitive development, and reading achievement: (4) sex role identity and reading achievement in elementary school children: (5) left and right brain hemisphere processing specialization and the implications for the Satz maturational lag model of specific reading disability: (6) critical reading skill and selected predictors for gifted sixth grade students: (7) the effect of mobility on reading achievement: (8) phonetic recoding and verbal rehearsal strategies in reading disabled students: (9) dentition as a predictor of reading readiness, readiness, and reading achievement: (10) the effects of locus of control and intrinsic motivation on the reading ability of children: (11) syntactic development in normal and dyslexic children: (12) reading correlates among groups of adolescent readers: (13) upper elementary school children's skills in classifying and inferring and their achievement in reading comprehension and vocabulary: and (14) nonverbal cognitive abilities and reading proficiency. (FL)

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Reading Achievement: Characteristics Associated with Success and Failure:

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THE RELATIONSHIPS BETWEEN READING ACHIEVEMENT, SELF-CONCEPT, AND ACADEMIC ABILITY OF MOBILE AND NON-MOBILE ELEMENTARY SCHOOL STUDENTS

Order No. 8001082

ABERCROMBIE, Virginia McGuire, Ed.D. The Florida State University, 1979. 109pp. Major Professor: Herbert Reese

This study was designed to determine the relationship between reading achievement and self-concept of geographically mobile and non-mobile students of approximately equal mental abilities and socio-economic levels in grades three, four, and five in one school in Northwest Florida.

All students enrolled in grades three, four, and five in one school were used as subjects (N=272). Three instruments were utilized to collect data for the study. The Otis Lennon Mental Ability Test, Form J, was administered to all students to establish ability levels, and the California Achievement Test, (CAT) 1970 Edition, Level 2 and Level 3, Form A, determined reading grade level equivalents. The Piers-Harris Children's Self-Concept Scale measured self-reported self-concept.

The factor of student mobility was determined by designating as the mobile group those who had changed schools three or more times.

The two groups, mobile and non-mobile in each grade, were divided into three groups according to mental ability as determined by the Otis-Lennon Mental Ability Test. The ability groups were then divided into above average, average, and below average groups according to the scores obtained on the Piers-Harris Children's Self-Concept Scale.

Means and standard deviations were computed and the t-test for significance was employed to test the mean differences between the mobile and non-mobile groups in all categories of ability and self-concept. Other comparisons of mean scores for reading achievement and self-concept were made by sex according to grade level, ability, and mobility. Examinations of mean reading scores and self-concept scores were made in search of patterns of decrease or increase between and within grade level groups.

The hypothesis was rejected that there is no significant difference in the reading achievement of mobile and non-mobile students of the same grade level, the same socio-economic level, approximately equal mental abilities, and equivalent levels of self-concept when 9 of the 27 categories tested proved to be significant.

The second hypothesis was accepted that there is no significant difference in the self-concept level of mobile and non-mobile students with approximately equal mental abilities, the same socio-economic levels, and the same grade level when no significant differences were found between the mobile and non-mobile means in any category.

The evidence furnished by the statistical analysis of the data provided the basis for the following conclusions: (1) A greater number of significant differences in the means of total reading achievement of mobile and non-mobile students occurred within the above average and average self-concept groups at all grade levels; (2) The differences favored the mobile students in five out of nine cases; (3) There were no significant differences in self-concept mean scores in any category; (4) There appears to be little relationship between self-concept and reading when students are grouped and analyzed by ability level.

It may be concluded from this study and the review of related literature that the causes of deficiencies in academic achievement are numerous and varied. Among the causes are: (1) educational factors such as lack of readiness, poor teaching methods, inappropriate or inadequate materials; (2) the lack of encouragement from the home and distracting environmental conditions; (3) physical factors, visual, auditory and motor problems or the lack of innate mental ability; and (4) excessive mobility resulting in changes of schools.

Deficiencies in academic achievement of students may be the result of any one of these causes or combinations of them; however, mobility alone does not appear always to be responsible for academic deficiencies or low self-concept.

A STUDY OF THE RELATIONSHIP BETWEEN READING COMPREHENSION AND VISUAL CREATIVITY OF EIGHTH GRADE STUDENTS

Order No. 8007131

BISHOP, SAMUEL EDWARD, PH.D. *University of Missouri - Columbia*, 1979. 125pp. Supervisor: Dr. Larry Kantner

Purpose. The major purpose of this study was to determine if a significant relationship existed between the four scores of the *Torrance Tests of Creative Thinking*, Figural Form A (*TTCT*) (Fluency, Flexibility, Originality and Elaboration), and the Graphic Similarity, Comprehension, Comprehending and Retelling scores of the *Reading Miscue Inventory* (*RMI*). The study also generated data of reading comprehension that showed reading patterns of students at different levels of creativity. This study presented a design that examined relationships between reading comprehension and visual creativity by comparing specific measurable traits of reading comprehension with specific measurable traits of creativity.

Procedures. The subjects were 72 randomly selected eighth grade students who were given both the *TTCT* and the *RMI*. Four hypotheses were composed to test the relationships using the scores of creativity as the independent variables and the reading scores as the dependent variables. Multiple regression analysis using the four independent variables in a simultaneous model was used to test the hypotheses.

Findings. Results indicated that there were no significant relationships between any of the four *RMI* scores and the linear combination of the four scores of creativity. As an individual variable, Flexibility was found to be negatively correlated to the Comprehending reading score at the .05 level of significance. Implications drawn from examples of individual test profiles suggest that similarities in approaches to teaching art and teaching reading should be explored further.

THE RELATIONSHIPS AMONG CONCEPTUAL TEMPO, PIAGETIAN LEVEL OF COGNITIVE DEVELOPMENT, AND FIRST GRADE READING ACHIEVEMENT

Order No. 8006224

BOOKOUT, RUTH ERNICE DYSON, PH.D. *The Florida State University*, 1979. 168pp. Major Professor: Lawrence E. Hafner, Ed.D.

In the present study, the relationships among conceptual tempo, Piagetian level of cognitive development, and first grade reading achievement were examined. An investigation was also conducted to determine which technique for organization of the data for analysis, categorization or use of a continuum, was most efficient.

The subjects for the study were the 52 students enrolled in the two first grade classes at the Developmental Research School at the Florida State University, Tallahassee, Florida. The sample included 25 males and 27 females.

The data were collected in two testing sessions in the spring of 1979. The subjects were tested individually using the Kansas Reflection Impulsivity Scale for Preschoolers, Form A (KRISP), a measure of conceptual tempo, and the Concept Assessment Kit--Conservation, Form A, a measure of Piagetian level of cognitive development. The Vocabulary and Reading subtests of the Stanford Achievement Test--Primary Level I, Form A (SAT) were administered as the measure of reading achievement.

Data analysis procedures included calculation of bivariate correlations, 95% confidence intervals for the bivariate correlations, and multivariate correlations for each of the correlations among error and latency scores on the KRISP, scores on the Concept Assessment Kit--Conservation, and the five subtests of the SAT for (a) total sample, (b) male subjects, and (c) female subjects, both for data retained in the original continuous form, and for categorized data. Error and latency scores on the KRISP wre used to create an impulsive/reflective subsample, upon which each of these data analysis procedures was also employed. Standard errors of estimate and proportion of variability shared in common were determined for each of the bivariate and multivariate correlations.

The results of the data analysis procedures suggested the following major conclusions: (1) Little relationship was indicated among the independent variables of conceptual tempo and Piagetian level of cognitive development, and the dependent variables of word reading, comprehension, word study skills, and total reading achievement at the first grade level. (2) Little relationship was indicated between conceptual tempo and Piagetian level of cognitive development. (3) Little relationship was indicated between conceptual tempo and vocabulary, while a significant relationship was found between Piagetian level of cognitive development and vocabulary. (4) Some differences were noted between the relationships for male and female subjects. A higher relationship between vocabulary and conservation for the males than for the females in this sample was noted. A higher relationship between latency and word reading for females than for

males in this sample was noted. (5) The two techniques for data analysis, categorization and use of a continuum, were concluded to be about equally efficient.

These conclusions were discussed and recommendations for further research were presented.

AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN CONCEPTUAL TEMPO AND READING COMPREHENSION

Order No. 8013067

BROWER, WILLIAM JOHN, PH.D. *The University of Connecticut*, 1980. 158pp.

The purpose of this study was to determine if a relationship exists between Kagan's (Kagan, Rosman, Day, Albert & Phillips, 1964) conceptual tempo construct, as conceived and operationalized in the Salkind and Wright (1977) integrated model of conceptual tempo, and three measures of reading comprehension. A concurrent aim of the study was validation of methodological improvements including the Salkind and Wright model that had been incorporated into the study. Conceptual tempo was measured by the *Matching Familiar Figures 20* (MFF20) (Cairns & Cammock 1978). MFF20 impulsivity and efficiency scores were obtained from formulae derived by Salkind and Wright (1978). MFF20 raw latency and error scores were used with Kagan's original conceptual tempo methods to compare results from the Salkind and Wright model with those obtained using Kagan's original conceptualization and operational definitions which result in four conceptual tempo groups: Impulsive, Reflective, Fast/accurate, and Slow/inaccurate. Measures used as indicators of reading comprehension included the reading subtest scores from the *Metropolitan Achievement Tests*, the *Basic Reading Inventory* (Johns, 1978) post-passage questions, and the *Reading Miscue Inventory* (Y. Goodman & Burke, 1972) comprehending score.

The study was conducted in the spring of 1979. A total sample of ninety-five third and fifth grade students, obtained by stratified random sampling techniques was used in the investigation. The sample was taken from the entire third and fifth grade population of a small (pop. 20,000) suburban town in southwestern Connecticut. Possible confounding variables for which control was sought included intelligence, sex, and age.

The data collected were analysed using partial correlation and step-wise multiple regression techniques. Analysis of variance and covariance techniques were used with Kagan's four conceptual tempo groups to assess differences in mean scores among groups.

The conclusions drawn from the statistical analyses of the data at the $p < .05$ level of significance in terms of the two major questions of the study were: (1) There is no significant relationship between the Salkind and Wright variable impulsivity and the three measures of reading comprehension. (2) There is no significant relationship between the Salkind and Wright variable efficiency and the three measures of reading comprehension.

Kagan's original conceptual tempo error variable proved to be significantly related to the *Metropolitan Achievement Test* reading subtest scores. The Salkind and Wright variables impulsivity and efficiency performed as predicted by the integrated model theory.

While the Salkind and Wright conceptual tempo variables did not prove to be significantly related to reading comprehension for this sample, they performed well in operationalizing the conceptual tempo construct and should be considered in future conceptual tempo research.

THE RELATIONSHIP BETWEEN EARLY IDENTIFICATION OF POTENTIAL LEARNING PROBLEMS USING THE MARYLAND SYSTEMATIC TEACHER OBSERVATION INSTRUMENT AND LATER READING ACHIEVEMENT IN ELEMENTARY SCHOOL

Order No. 8006754

COOPER, CHARLENE, PH.D. *University of Maryland*, 1979. 120pp. Supervisor: Dr. Carol Seefeldt

The purpose of this research was to determine whether a kindergarten screening device for the identification of potential learning problems based on structured teacher observation could provide predictive data about whether these students would have learning problems as indicated by their reading achievement later in elementary school. The structured teacher observation instrument used in this study was the Maryland Systematic Teacher Observation Instrument (MSTOI). This rating scale assessed kindergarten students in the area of cognition, sensory-perception, psychomotor, affect/motivation and language.

The study sought to find out to what extent there was a correlation between the kindergarten MSTOI results and reading achievement as measured by the California Achievement Test (CAT) administered at the beginning of second grade. Additionally, a comparison was made of the reading achievement of those designated as having potential learning problems (high risk) with those who had not been so designated (low risk).

From the 9,000 second graders of the Baltimore City Public Schools, 221 students who had on file 1976 MSTOI results and 1978 California Achievement Test reading scores were randomly selected.

Correlations of the MSTOI results and the CAT reading scores revealed the following: (1) The Pearson's Product-Moment correlations for each pair of the MSTOI sub-scores were all significant at the .001 level. All correlations were above .59; the highest correlation was .81. The sub-scores of the MSTOI were highly correlated and therefore not distinct. (2) A multiple regression analysis considering the relationship between the CAT reading scores and the MSTOI sub-scores considered jointly indicated a low positive relationship with R of .40. The computed F of 10.23 was significant at the .05 level, indicating that the obtained R differed significantly from zero. (3) The Sensory-Perception sub-score contributed most to the predictive efficacy of the MSTOI; the Affect/Motivation sub-score contributed the least. (4) The simple r obtained by the correlation of the Sensory-Perception sub-score with the CAT reading scores (.39) explained about the same amount of variance as did the multiple R (.40) for the combined sub-scores. (5) The combination of age, sex, and program designation with the MSTOI sub-scores as predictor variables produced a low positive correlation with R of .41. The computed F of 7.70 was significant at the .05 level, indicating that the obtained R differed significantly from zero.

The investigator concluded that the MSTOI scores acquired in kindergarten provided predictive data about the reading achievement at the beginning of second grade to a minimum degree due to the low value of the correlations. Knowledge of age, sex, and program designation only slightly affected the predictive efficacy of the MSTOI. The investigator found a significant relationship between the kindergarten MSTOI scores and late reading achievement but suggested improvements to the instrument to strengthen its reading predictive validity.

FAMILY INTERACTION AND READING ACHIEVEMENT IN HIGH SCHOOL MALES

Order No. 8007665

DORFMAN, LEONARD GARY, PH.D. *Hofstra University*, 1979. 87pp.

This study explored the relationship between selected family interaction variables and reading achievement. It was hypothesized that a boy's attitude toward his father, his degree of independence and the amount of parent-son anger would jointly explain a significant portion of the variance in reading achievement, with each of these actors having a significant partial correlation with that variable. Ninety-three self-selected male high school students were given the *Stanford High School Reading Test* (1964) and these scores were correlated with scores on the Attitude Toward Father, Independence, and Parent-child Friction scales of the *Elias Family Opinion*

Survey. A multiple regression analysis was used to examine the data. The results indicated that the regression of reading achievement on attitude toward father, independence and parent-son anger was significant at the $p < .01$ level. The R^2 was .29. Only the partial correlation of reading achievement with independence was significant ($p < .01$). When a forward stepwise inclusion method of entering the independent variables in the regression equation was used, independence (first step) and parent-son anger (second step) both contributed significantly to the explained variance at their respective steps. It is theorized that parent-son anger may have functioned as a suppressor variable.

EFFECTS OF TASK TYPE, PRESENTATION MODE, AND INTERFERENCE CONDITION ON THE READING COMPREHENSION OF FOURTH GRADERS Order No. 8010974

HURLBUTT, DAVID W., PH.D. *Fordham University*, 1980. 274pp. Mentor: Lillian C. R. Restaino

Current information processing theories of reading assert that a reader will attain a long lasting understanding of what is read when components of text are maintained long enough in short-term memory for a framework of meaning to be established. One critical difference in the comprehension of good and poor readers may be the greater efficiency of good readers in overcoming interference to short-term memory while integrating components of meaning into larger units.

The purpose of this investigation was to determine whether differences existed between short-term memory functioning of good and poor readers. The differences were determined by testing the effects of interference, chunking, and amounts of text upon the performance levels and reaction times of the readers.

Fourth graders with appropriate basic word recognition skills for reading fourth-grade level material were included in the study. Forty subjects scoring in the upper quartile of a reading comprehension test were categorized as good readers and forty scoring in the lower quartile of the same measure were categorized as poor readers.

The investigation was conducted in two experiments. In Experiment I, the free recall of isolated words, five high-imagery words and five low-imagery words were flashed one word at a time. In Experiment II, single imperatives and sets of three imperatives were flashed word-by-word or chunked in sentence parts. Subjects demonstrated comprehension through a motor or a verbal response as directed by the imperatives. In both experiments, subjects were randomly assigned to an interference or non-interference condition. Interference was defined as flashes containing five numerals; noninterference was defined as blank flashes.

The results indicated that: (1) the performance levels and reaction times of good readers were significantly better than those of poor readers; (2) performance levels and reaction times for non-chunked materials were significantly better than for chunked materials; (3) performance levels and reaction times for single sentences were significantly better than for three sentences; (4) performance levels were not significantly different as a function of interference condition; and (5) the motor responses of subjects without interference were significantly faster than those of subjects with interference. Furthermore, examination of the performance behaviors of subjects indicated that good readers were more accurate than poor readers (a) when more words were chunked in the flashes and (b) when more sentences were presented.

The investigator concluded from these findings that: (1) good readers made a more efficient use of chunks presented than did poor readers; (2) good readers made a more efficient use of processing time when larger amounts of text were presented; and (3) across all conditions, the reaction times of good readers were significantly faster than those of poor readers. In addition, it was concluded that across reading levels, interference effects in reaction time were evident when more items of information and less processing time were provided.

The findings and conclusions of this investigation supported the following recommendations for improving reading instruction: (1) poor readers need help in organizing text and holding what they organize while processing it further; (2) instructional materials should be structured to encourage and to facilitate text organization; (3) young readers should be shown how to use such aids when provided them; and (4) instruction provided should include minimal interference.

THE RELATION OF THE READING ACHIEVEMENT OF CHILDREN TO THEIR SYNTACTIC MATURITY AND SOCIO-ECONOMIC STATUS Order No. 8013079

JOHNSON, MORTIMER SAUNDERS, PH.D. *The University of Connecticut*, 1980. 129pp.

Purpose. This study explores the hypothesis that interrelationships exist among reading comprehension, syntactic maturity in oral expression and socio-economic background, coupled with the exogenous variables of sex, age and intelligence. The major hypothesis is supported by three sub-hypotheses. In the first two, the differences among mean scores of reading comprehension and syntactic maturity are examined among socio-economic subgroups, adjusting for sex, age and intelligence. In the third sub-hypothesis, the study assesses the relationship between reading comprehension and syntactic maturity, partialing out the influences of sex, age and intelligence.

Procedures. Oral language samples were recorded on audiotape of ninety "eight year old" third grade students in an urban community in Connecticut. After transcribing these, the samples were parsed into T-units to determine syntactic maturity and a count taken of total words and total T-units. The mean words per T-unit for each subject was then assembled with data for: reading comprehension taken from the Gates-MacGinitie *Reading Test*; intelligence from the Lorge-Thorndike *Intelligence Test*; socio-economic status determined by the Hollingshead and Redlich *Index of Social Position*; sex, and age.

Analysis of the data was performed by a series of programs. (1) In examining the differences in mean scores of reading achievement and words per T-unit, analysis of co-variance programs were computed, adjusting for sex, age and intelligence. These programs were supported by one-way analysis of variance and Tukey a posteriori ranges tests. (2) In assessing the relationship of reading comprehension to words per T-unit, a partial correlation program was computed, partialing out the influences of sex, age and intelligence. (3) The major hypothesis was explored in three ways: (a) Examination of the matrix table of zero order correlations of all variables. (b) Computing a partial correlation of reading comprehension with the interaction of words per T-unit and socio-economic status, partialing out sex, age and intelligence. (c) Computing a multiple regression equation, entering all independent variables in a combination of hierarchical and step-wise inclusion techniques.

Scatterplots were generated, a series of function transformations was employed for analysis of curvilinearity and a variety of univariate frequencies were charted to describe the population.

Conclusions. All null hypotheses were rejected. The data suggest: (1) There are significant differences among means of reading comprehension and words per T-unit for socio-economic subgroups. (2) There is a significant relationship between reading comprehension and words per T-unit, partialing out the influences of sex, age and intelligence. (3) There are significant interrelationships among reading comprehension, words per T-unit and socio-economic status. (4) The data suggest, too, that, while significant, the relationship between reading comprehension and words per T-unit is not a strong relationship. Words per T-unit does not explain enough of the variance in reading scores to be used as the lone independent variable in a simple regression equation of prediction of reading comprehension scores.

THE EFFECT OF MOBILITY ON READING ACHIEVEMENT AMONG FIFTH-GRADE PUPILS IN CLARK COUNTY, NEVADA Order No. 8005903

LANDMAN, JEROME BARRY, PH.D. *Purdue University*, 1979. 143pp. Major Professor: Norbert J. Nelson

This study was concerned with the relationship of changing schools to reading achievement among fifth-grade pupils in the greater Las Vegas area, part of the Clark County School District, Nevada. The community in which the study was conducted is not only one of the largest school districts in the United States both in terms of area and enrollment, but it is also one of the fastest growing areas in the country experiencing an exceptionally high rate of pupil mobility.

A review of the literature indicated a lack of consensus on the subject of the effects of mobility on achievement. The literature identified numerous other variables which may affect the relationship of mobility with achievement, and it also suggested that the diversity of findings may be related to the unique characteristics of different communities and their populations.

The sample for this study consisted of 1389 fifth graders. The study examined the relationship of achievement and mobility, socioeconomic status, IQ, family stability, parental military status, parental gaming employment, sex, and racial-ethnic identification. It also examined the relationships among these variables and their effects on the relationship of mobility and achievement. Multiple regression; decomposition of the contributions of the independent variables to achievement into the total, unique, and common contribution of each variable; and partial correlation were employed in analysis of the data.

High achievement was associated with high IQ, high SES, and stable family life. Low achievement was associated with high mobility, racial-ethnic minorities, and gaming-employed parents. High mobility was associated with military parents. Low mobility was associated with high achievement, high family stability, high IQ, and high socioeconomic status. When other independent variables were controlled, however, only IQ and socioeconomic status were found to be both significantly and meaningfully related to achievement. The effect of mobility, which was minimal to begin with, seemed to be explained primarily by the inter-correlation of mobility with other variables rather than due to a unique contribution of mobility.

It was concluded that in the Clark County School District, mobility was not meaningfully related to the reading achievement of fifth-grade students.

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN A CRITICAL READING SKILL AND SELECTED PREDICTORS FOR GIFTED, 6TH GRADE MIDDLE SCHOOLERS

Order No. 7925745

LEDERER, James Brian, Ed.D. University of Maryland, 1979. 148pp. Supervisor: Dr. Saul Rogolsky

The purpose of this study was to examine the relationship between performance on a specific critical reading task, the recognition of assumptions, and a set of five individual difference predictors of such performance with students drawn from a population of gifted, sixth grade middle schoolers.

The problem of this study was twofold: (1) to see if there is a relationship between performance on a specific critical reading task, the recognition of assumptions, and the set of predicting variables of cognitive style, sex, reading achievement, nonverbal intellectual ability and verbal intellectual ability with students drawn from a population of gifted, sixth grade middle schoolers; (2) to see if there is a relationship among the pairs of predicting variables of cognitive style, sex, reading achievement, nonverbal intellectual ability, and verbal intellectual ability with students drawn from a population of gifted, sixth grade middle schoolers.

The students were selected by using State and Local identification procedures from a public school system in suburban Maryland. The population is drawn from middle income families. There were seventy-four students in the sample studied. The Watson-Glaser Test for Critical Thinking Subtest for Recognition of Assumptions was used to measure critical reading performance in the area of assumption recognition. Student records were used to determine the sex of each student. The Group Embedded Figures Test was used to assess cognitive style. The Iowa Tests for Basic Skills were used to obtain reading achievement grade level equivalent scores. The Cognitive Ability Test was used to obtain nonverbal and verbal intellectual ability scores.

The multiple regression formula was used to determine the optimal predictors from the selected group of predictors for the specific aspect of critical reading under investigation. Additionally, F tests were used to determine the needed level of significance for the predictors to be significant. Snedecor's Table of 5% and 1% was used to determine the needed level of significance among the pairs of predictors.

The results indicated that the group of predictors, at the most, accounted for 4 per cent of the variance in critical reading (assumption recognition) and that the null hypotheses were not rejected. Of the predictors, the largest one was reading achievement.

In summary, it appears that there are various ways to look at groups of gifted students. When the entire group of gifted students is viewed as homogeneous, of the predictors employed in this study, reading achievement best predicts the variance on individual differences on assumption recognition. Intellectual ability, sex, and cognitive style appear to minimally contribute to the variance on individual differences on assumption recognition. When gifted students are grouped on the basis of achievement level, cognitive style type, or level of intellectual ability, serendipital data yielded trends worthy of further investigation owing to type two error possibilities.

Not only is it appropriate to investigate other aspects of critical reading than assumption recognition, but it is also germane to look carefully for the other 96 per cent worth of predictors to better help to predict variance on assumption recognition. Such predictors appear not to be the traditional ones obtained from student records nor ones that may be easily acquired. Observational studies of students who are successful in assumption recognition represent one way by which to generate hypotheses which may account for the rest of the variation.

SEX ROLE IDENTITY AND READING ACHIEVEMENT IN ELEMENTARY SCHOOL CHILDREN

Order No. 8005589

LOWERY, HOLLIS GREY, ED.D. *University of Houston*, 1979. 144pp.

The purpose of this study was to examine the relationship of sex role identity and reading achievement for males and females in grade levels 2, 3, and 4 and the effect of sex and grade level on this relationship.

The self-descriptive version of the *Sex Stereotype Measure II* (SSMII) and the Reading subtest of the *Metropolitan Achievement Test* were administered to 161 subjects.

The SSMII was factor analyzed to determine construct validity and Factor 2 was designated a feminine factor for the purpose of this study.

Pearson Product Moment Correlations were determined for the femininity factor and reading achievement for each sex at each grade level. Correlation coefficients were transformed to Fisher's Z_r scores and confidence intervals were constructed to determine if the correlation coefficient was significantly different from zero. The patterns of the confidence intervals determine if there were differences in the relationship due to sex and grade levels.

The results of the analysis were: There was no significant correlation between sex role identity and reading achievement for males and females in grades 2, 3, and 4. There was no significant effect of sex or grade level for the correlation between sex role identity and reading achievement.

Related findings indicated that males in the sample for this study were not inferior in reading achievement to the females at each grade level. A general tendency for all subjects to describe themselves with feminine stereotypes more often than with masculine stereotypes was noted. Neither boys nor girls employed sex stereotypes in their self descriptions to as great a degree as was available to them.

AN INVESTIGATION OF LEFT AND RIGHT HEMISPHERE PROCESSING SPECIALIZATION AND THE IMPLICATIONS FOR THE SATZ MATURATIONAL LAG MODEL OF SPECIFIC READING DISABILITY

Order No. 8010604

LYNCH, DENNIS JOHN, PH.D. *University of Georgia*, 1979. 115pp. Director: Alan S. Kaufman

Unimanual motor tasks demanding either left hemisphere successive or right hemisphere simultaneous processing were used to assess the degree of specialization of the hemispheres in 80 younger, grades 2 and 3, and older, grades 5 and 6, normal and disabled readers.

Using a maturational lag conception of specific reading disability, it was hypothesized that disabled readers would show less left and right hemisphere specialization and, consequently, poorer performances on motor, perceptual, memory, and conceptual tasks that were age appropriate and that primarily demanded specialized successive and simultaneous modes of processing than their controls. The developmental hypotheses of this investigation stood in contrast to those of the Satz maturational lag model of specific reading disability which maintains that processing deficits in this disabled population are restricted to age appropriate left hemisphere controlled processes.

Findings indicated successive and simultaneous processing weaknesses on age appropriate cognitive tasks (perceptual, memory, and conceptual) for both younger and older disabled readers. However, since manual laterality measures failed to distinguish the normal and disabled readers, the investigation was unable to provide support for the hypothesis that manual laterality measures provide a valid means of assessing the degree of hemisphere specialization.

PHONETIC RECODING AND VERBAL REHEARSAL STRATEGIES IN SECOND GRADE READING DISABLED CHILDREN

Order No. 8005055

MCCLURE, SUSAN YOUNG, PH.D. *The University of North Carolina at Chapel Hill*, 1979. 136pp. Supervisor: James D. McKinney

The purpose of the present study was to investigate differences in the ability of good and poor young readers to use a phonetic code in short-term memory and to employ verbal rehearsal techniques in a recognition task. Two separate experiments were conducted. In Experiment 1, it was hypothesized that good readers would use a phonetic code in memory to a greater extent than poor readers. Thus, good readers would be more penalized than poor readers by the phonetic similarity of rhyming items. Further, it was predicted that good readers would spontaneously rehearse the to-be-remembered items more than poor readers when provided with an opportunity to do so.

The experimental design was a 2 (Reading Group) x 2 (Visual/Auditory) x 2 (Rhyming/Nonrhyming) factorial with repeated measures on the second and third factors. Subjects were 25 disabled readers and 25 normal readers in the second grade. Following a word identification pretest, subjects were presented with visual and auditory word recognition trials in which the stimuli were rhyming and nonrhyming sets of familiar words. Each test wordset was presented for a four-second exposure, followed by a pause, and then a four-second exposure of a recognition wordset. Subjects were to state whether the two pairs of wordsets were the same or different. Recognition was tested under two experimental conditions: immediately after presentation and after a 15-second delay. During the delay condition, spontaneous verbal rehearsal (lip movement) was monitored in both reading groups. Analyses of variance on error scores revealed that: (1) the word recognition performance of good readers was superior to that of poor readers for both auditory and visual trials, (2) the two reading groups were not differentially affected by rhyming wordsets for either channel of presentation, and (3) good readers were observed to engage in more rehearsal activity than poor readers during the delay interval.

Experiment 2 was designed as a training study to determine whether instruction in the use of an overt rehearsal strategy would facilitate the word recognition memory of poor readers. Good and poor readers in Experiment 1 were randomly assigned to either an experimental group (strategy training) or control group (no strategy training). Subjects were presented with visual word recognition trials under a delayed condition. Stimulus wordsets were the same as those used in Experiment 1. Results revealed that reading disabled children who were taught to rehearse the wordsets outloud did no better than poor-reader controls on the word recognition task. Analysis of taped rehearsal protocols of the experimental groups indicated qualitative and quantitative differences in the rehearsal styles of the two reading groups. Poor readers verbalized the wordsets less often and less accurately than good readers.

The results of both Experiments 1 and 2 were interpreted as a challenge to the hypothesis that good and poor readers differ in their ability to use a phonetic code to facilitate short-term memory. In addition, it was argued that the data provided evidence of a verbal rehearsal deficit in young reading disabled children.

DENTITION AS A PREDICTOR OF READINESS, READING READINESS, AND READING ACHIEVEMENT IN KINDERGARTEN, FIRST-GRADE AND SECOND-GRADE BOYS

Order No. 8007486

MCFARLAND, MARTHA ANN, PH.D. *The Florida State University*, 1979. 105pp. Major Professor: Dr. Billy M. Guice

The purpose of this study was to research the hypothesis that boys with more advanced tooth eruption would show higher levels of performance on *The Metropolitan Readiness Test* than boys with fewer second teeth or no second teeth.

The study consisted of 37 boys enrolled in kindergarten, first and second grade at the Florida State University Developmental Research School. Instruments used in the study were: *The Metropolitan Readiness Test, The Metropolitan Reading Battery, The Test of Basic Experiences - General Concepts Test* and the *Goodenough-Harris Drawing Test.* An oral examination, panorex and front-of-the-mouth x-rays were also utilized in the study.

The *t* test for a difference between independent means was used to test for a significant difference in group means at the .05 alpha level. Due to the difference in sample size, a harmonic mean (n') was computed in order to determine power.

Five hypotheses were tested and one was rejected. The results of hypotheses one and two indicated that the use of second tooth eruption as a predictive measure for readiness does not seem to be of value for boys at the kindergarten level. The data also indicated that more advanced second tooth eruption is not a useful measure of prediction for reading achievement and grade placement (H_o3, H_o4) for first and second grade boys.

An analysis of the data for H_o5 indicated that second tooth eruption was of value as a predictor of mental age scores for kindergarten, first and second grade. Tooth eruption apparently has no value as a predictor of teacher recommendation for promotion (H_o6). The sixth hypothesis was analyzed using percentage.

THE EFFECTS OF LOCUS OF CONTROL AND INTRINSIC MOTIVATION ON THE READING ABILITY OF CHILDREN

Order No. 8003250

MARGOL, JERRY MARVIN, PH.D. *California School of Professional Psychology, Los Angeles*, 1979. 91pp. Chairperson: Daniel Golden

The overall objective of this study was to investigate whether children with a reading disability feel internally responsible for their successes and failures in situations of academic-achievement. Another objective was to assess the extent to which Reading Disabled children, as compared to Normal Readers, are intrinsically motivated towards academic-achievement tasks. An investigation into the correlation between accepting responsibility for the outcome of one's performance and degree of intrinsic motivation was also conducted.

A proposed prerequisite for the presence of intrinsic motivation in academic-achievement situations is a feeling on the part of the child that he is in control of or feels responsible for his successes and/or failures. A child who fulfills this prerequisite will display greater persistence in achievement situations. On the other hand, a child who feels that the outcome of his performance is left to fate, luck, or someone other than himself, will avoid, or more or less become passively involved in situations of academic-acheivement.

The hypotheses in this study were tested by means of independent one-tailed t-tests and analysis of covariance.

The overall results found that Normal Readers accepted responsibility for their successes to a significantly greater degree than did Disabled Readers ($p < .01$). No significant difference was found between the two groups on their willingness to accept failure. Also supported was the correlation between reading ability, accepting responsibility for one's successes, and level of intrinsic motivation ($p < .01$).

Although the subjects were limited to Caucasion males, aged 7.11 to 9.4, presently in the third grade, speculations as to the generalizability of the results were presented. Some of the broader implications of the study were discussed, and recommendations for further research explored.

The results of this study suggest that within the remediation process of reading disabilities one should include both the mechanics of reading, as well as emphasis on the motivational system of the child. The degree of motivation appears to be dependent upon feeling responsible for or in control of one's successes. Also, locus of control and intrinsic motivation appear to be interrelated to one's self-esteem.

CONTRIBUTIONS OF NON-VERBAL COGNITIVE ABILITIES TO THE READING PROFICIENCY OF ELEMENTARY SCHOOL CHILDREN

RICE, Desmond Victor, Ed.D. University of Southern California, 1979. Chairperson: Professor Grayce Ransom

Purpose. The purpose of this study was to compare high and low levels of reading proficiency with the development of selected non-verbal reasoning as measured by aspects of musical perception and visuo-spatial reasoning.

Procedure. The procedure was accomplished in the following five steps: (1) Selection of a standardized reading test, and the determination of two measureable areas of non-verbal skills which appear to be predominantly processed by the right hemisphere. Appropriate tests were found to measure these areas; (2) Selection of six schools from which to draw the sample population. One school was to be used as a pilot study purely to test administration procedures. Reading tests were administered in each of the schools, from which the sample population in the appropriate grade levels and meeting the percentile limitations was drawn; (3) Administration of the tests in the five schools over a 2-week period; (4) Scoring of the non-verbal measures and the tabulation of all data for the entire group tested was accomplished; (5) The data were analyzed primarily using the Pearson product-moment correlations, and the point-biserial correlation coefficients. T-values for these were determined to test for significance at or above the .05 level.

Findings. (1) Moderate to weak relationships with correlation coefficients of about .6 or less exist between reading performance and the visuo-spatial reasoning and the music ability of children at the lower elementary school level; (2) Rather strong relationships, with correlation coefficients of about .7 existed between reading performance and the pitch and timbre recognition of upper elementary school children. Weaker correlations between reading and tonal memory and spatial relationship measures were found; (3) Significant differences were found between the non-verbal performance of the high reading achieving and low reading achieving elementary school children as a whole; (4) When results of the lower elementary grades were separated from those of the upper elementary grades, there was found to be no significant difference between the males and females of either group, on the non-verbal measures. However, there was a significant difference between the males and the females on the reading measure; (5) There was a possible favoring of processing information through visuo-spatial, non-verbal channels by a large percent of those with low reading achievement; (6) The students with highly developed reading skills did not also have as highly developed spatial reasoning and timbre/pitch/tonal memory aspects of music ability.

Conclusions and Implications. Selected conclusions are: (1) More attention needs to be given in the elementary school to the early development of certain music and visuo-spatial skills; (2) At lower elementary levels, non-verbal reasoning processes are not keeping up with high reading development. Yet the spatial/music skills in a large percentage of cases of low reading performers surpass their reading ability; (3) Low correlations for the low reading achievers with non-verbal measures indicates that there was great diversity, demonstrating that some had developed the non-verbal avenues of reasoning to a very high extent; (4) Learning can be facilitated, if teachers were to devise ways to facilitate the multiple processing systems occurring in the human brain.

Recommendations. (1) More research is needed in relation to cultural influences affecting left/right hemispheric processes and reading acquisition; (2) Other non-verbal skills should be analyzed for their effect on elementary school reading; (3) Teacher-education courses should provide a greater awareness to the multiplicity of options available for fostering more efficient learning; (4) Study should be given to the effect of early music and visuo-spatial education and the improvement of reading performance; (5) Study the effect of audio-visual approaches to Bible reading and its impact on reading improvement.

THE RELATIONSHIP BETWEEN SELECTED COGNITIVE VARIABLES AND BEGINNING READING ACHIEVEMENT

Order No. 8011986

ROBECK, CAROL PARK, PH.D. *Texas A&M University*, 1979. 261pp. Chairman: Dr. Robert E. Shutes

Using a single measure of reading achievement at the end of first grade, prior studies have investigated the relationship between one or two cognitive variables and success with beginning reading. The purpose of this study was to: (1) incorporate four categories of cognitive variables in order to investigate the possibility of an optimal interrelationship among the variables which maximize their predictive power for successful beginning reading achievement; (2) determine if the cognitive variables associated with reading achievement at the end of first grade would also be associated with achievement at the end of second and third grade; (3) determine if the same set of cognitive variables are associated with different measures of reading.

Cognitive variables found in the literature and investigated in this study are: (1) performance in tasks of classification including class inclusion, multiple classification, conservation of weight, conservation of liquid, and seriation as found in Piaget's cognitive development theory; (2) cognitive style (field independence-dependence) as measured by the Children's Embedded Figures Test; (3) children's understanding of reading-related concepts (linguistic concepts of "letter-sound" [phoneme], "word," and "sentence," and written word boundaries; and (4) factors of the Wechsler Intelligence Scale for Children - Revised, verbal comprehension, perceptual organization, and freedom from distractibility.

Three aspects of beginning reading achievement were examined providing three criterion variables: (1) oral comprehension; (2) silent comprehension; and (3) word recognition. An individual reading inventory, The Pupil Placement Test, was used to measure the criterion variables.

Complete data were obtained and subsequently analyzed from 101 subjects randomly selected from all first, second, and third grade students enrolled in the local school district. Each grade was analyzed separately. Analyses used to examine the interrelationships between the predictor variables and their relationship with the criterion variables were: (1) simple correlations to determine the relationship between pairs of variables; (2) partial correlations to examine the effect of verbal and performance IQ on each of the correlations between predictor and criterion variables; (3) commonality analysis to find the unique contribution provided by each

of the predictor variables to the variance of each of the criterion variables; and (4) multiple stepwise regression to ascertain which set of predictor variables accounted for the greatest amount of explained variance for each of the criterion variables.

The study results provided support for the importance of the predictor variables investigated for successful first grade reading achievement but less so for third and second grades respectively. The explained variance for each of the criterion variables, oral comprehension, silent comprehension, and word recognition at each grade level was: .776, .726, .765; second grade - .367, .419, .575; third grade - .605, .617, .453. The importance of the variables was not clear for two reasons: (1) little of the explained variance could be attributed to any single variable (perceptual organization contributed the greatest amount of explained variance, 10 percent, to oral comprehension at grade two); and (2) what little explained variance could be attributed to a single predictor variable changed with each type of reading measure used and with each grade.

The conclusions are: (1) importance of cognitive variables changes with the stage of development in reading; (2) concurrent predictive value of cognitive variables changes with the type of reading measure used; (3) performance of students on criterion measures may be as dependent on the reading approach used as it is on a command of cognitive variables. Recommendations to further understanding of the importance of cognitive variables in future investigations are: (1) account for the reading approach used; (2) provide criterion measures which mirror the instruction provided; (3) account for the subject's reading developmental stage.

SYNTACTIC DEVELOPMENT IN NORMALS AND DYSLEXICS: AN EMPIRICAL EXAMINATION OF TWO THEORETICAL EXPLANATIONS OF DYSLEXIA

Order No. 8013899

ROIT, MARSHA L., ED.D. *Harvard University*, 1980. 231pp.

A review of the research in the field of dyslexia shows that there is consensus that children with specific reading disorders have a primary disability in comprehending and using language. There is, however, little understood about the developmental course of this disorder. Two theories exist in the literature that attempt to explain the fundamental nature of specific reading disorders, (1) the developmental lag hypothesis and (2) the neurological deficit hypothesis. Proponents of the lag hypothesis suggest that dyslexics may progress through the same stages of development as normals but at a slower rate. The proponents of the deficit hypothesis contend that dyslexics not only lag behind normals but that dyslexics may demonstrate an atypical or idiosyncratic course of development. It has been suggested that within the dyslexic population both a lag group and an idiosyncratic group may exist. This research examines the syntactic development in normal and disabled readers to determine if patterns between syntactic structures emerge within the dyslexic sample that will support the existence of a lag and/or a deficit group.

Twenty-eight poor readers and 26 grade-matched normals in grades two through five were selected according to a set of predetermined criteria. Measures assessing specific syntactic structures and related language processes were administered to both samples. Syntax measures included an abbreviated form of the *Carrow Test for the Auditory Comprehension of Language* and two experimental tests for the imitation and comprehension of later acquired syntactic structures. Memory tests (the *ITPA Digit Span* subtest and the *Detroit Test of Learning Aptitude* subtest for recall of unrelated words) and vocabularly measures (the *Peabody Picture Vocabulary Test* and the Old*field-Wingfield Naming Test*) were given. The *Slosson Oral Reading*, the *Gray Oral Reading* and the *Durrell Silent Reading Tests* provided individual measures of the reading ability of the dyslexic group.

Dyslexics imitated and comprehended fewer complex structures. Performance by the normal sample on the imitation and comprehension tasks were analyzed to determine patterns of syntactic development. Patterns for the dyslexic sample were compared to those of the normals to determine if dyslexics perform like normals but at a slower rate or they demonstrate atypical or idiosyncratic patterns of acquisition for these structures. Correlation coefficients were calculated to determine if a relationship exists between the dyslexics' performance on The Test for the Auditory Comprehension of Language and their syntactic patterns and if a relationship exists between the severity of the reading problem and performance on the syntax task. Furthermore, the contribution of memory and vocabulary to the syntax scores for both samples were determined.

From an analysis of the data it was possible to determine that two groups of children with specific reading disabilities exist within this sample. The performance of one group was similar to normals while the other group was more idiosyncratic or variable. These findings support both the lag and the deficit hypotheses and further confirm findings in the research that specific reading disabilities is not a unitary syndrome but a multidetermined syndrome. In addition, the scores on the memory tests contribute differently to the performance of dyslexics and normals on the comprehension and imitation tests.

AN INVESTIGATION OF READING CORRELATES AMONG GROUPS OF ADOLESCENT READERS

Order No. 7928356

SASKI, James Walter, Ph.D. The University of Texas at Austin, 1979. 131pp. Supervisor: J. Lee Wiederholt

Ten separate factors reported as correlates of reading were identified through a review of the literature in the fields of education, reading, and psychology. The 10 identified correlates of reading represented academic, intellectual, linguistic, perceptual, and affective factors related to reading. In this study, 90 eighth grade students were assessed on these 10 correlates using a three group design: students on or above grade level in reading, students 1–3 years below grade level, and students more than 3 years below grade level. Statistical analyses revealed several significant differences in the predictive power and rank ordering of the reading correlates, as defined in the literature and as determined by this study. Pearson correlation coefficients showed the predictive power of the 10 correlates of reading to be similar, but more statistically significant, than those same correlates reviewed in recent literature. All academic, intellectual, and linguistic variables were statistically significant, while perceptual and affective variables were nonsignificant. Differences were also found in the rank ordering of the reading correlates among the three groups of adolescent readers, with no consistent rank order of correlates among the three adolescent reading groups. Differences were also found in the mean performance levels of the three reading groups on measures of the 10 reading correlates. A series of one-way analyses of variance and one-way analyses of covariance (with intelligence as the single covariant) demonstrated differences between groups of adolescent readers. Finally, multiple regression and discriminant function analyses procedures determined written expression and several additional academic and linguistic factors to be the best predictors of general reading ability among adolescents. Further research is needed to delineate specific relationships between reading correlates and general reading ability with adolescents.

THE RELATIONSHIP BETWEEN PIAGETIAN CONSERVATION AND READING SKILL DEVELOPMENT IN FIRST, SECOND AND THIRD GRADE BOYS

Order No. 8011041

SHARP, EARLENE LOUISE, PH.D. *United States International University*, 1979. 98pp. Chairperson: Lambert Baker

The Problem. The study sought to clarify the relationship between conservation attainment and reading skill development in first, second and third grade boys. The intent specifically was to investigate whether a relationship existed between attainment of the concrete operational stage of development, as defined by Piaget, and reading skill development; to determine whether there was an increasing relationship between conservation and reading achievement through the early concrete operational stage of development, and to define which Piagetian conservation assessment tasks provided the most power in predicting reading achievement.

Method. First, second and third grade boys were assigned to delayed, average and accelerated reading groups based upon their scores on the Wide Range Achievement Test and their level placement in the McMillan Reading Program. Six Piagetian conservation tasks: number, substance, continuous quantity, weight, volume 1 and volume 2, were administered. The Goldschmid and Bentler ratings of 0, 1 and 2 were used. Criteria for administration and scoring were based upon Goldschmid and Bentler's *Concept Assessment Kit-Conservation.* Volume 1 and volume 2 were adapted from Burk's *Piagetian Attainment Kit* to met the Goldschmid administration and scoring standards. Kendal Tau correlation was used to determine relationship between reading group assignment and ratings on conservation tasks. Chi Squares were processed to determine whether the increased demands of reading in the primary grades required an increasingly higher level of conservation ability. Discriminant analysis was used to select the task or tasks with the greatest predictive strength at each grade level.

Results. At first grade, all Piagetian conservation tasks had positive but very weak correlations with reading skill. None reached the .05 level of significance. At second and third grades, all tasks were significant at the .05 level and were moderately correlated with reading skill. Chi Square values did not reach significance on any task at first grade level. At second grade, significant Chi Square values differentiated the delayed from average and accelerated readers on number, substance and continuous quantity. Weight, in addition, separated the average from accelerated readers. There were significnat Chi Square values between delayed and accelerated readers on number, substance, continuous quantity and weight. Both volume tasks differentiated between the accelerated and delayed groups when the rating of 1 was combined with 2. At third grade, there were significant Chi Square values between delayed and average readers on number, substance, continuous quantity and weight. Both volume tasks were significant when combining ratings of 1 and 2. All tasks reached significance between the delayed and accelerated readers. Only volume 1 and 2 differentiated average and accelerated readers and only when combining ratings of 0 and 1. At first grade, no task was selected by the discriminant analysis as having predictive power. At second grade continuous quantity separated with 47 percent accuracy delayed readers from the average or better. At third grade, number and substance were selected as the most powerful tasks, accurately separating the delayed group from average and better readers with 80 percent accuracy. Results suggest there was no fundamental relationship between ability to conserve and reading achievement at first grade level; however, a causal relationship appeared to exist as children matured. As grade level increased, greater conservation stability developed and a higher level of difficulty was required for reading achievement. By third grade, the magnitude of difference in ability to conserve between delayed and average or better readers was greater than at second grade.

THE EFFECTS OF SELECT LATERAL DOMINANCE PATTERNS UPON READING ACHIEVEMENT AND MOTOR PERFORMANCE

Order No. 8000026

STERLING, CHARLES LLOYD, ED.D. *East Texas State University,* 1979. 181pp. Adviser: Dorothy Ingram

Purpose of the Study. The investigation was undertaken in an attempt to determine whether or not lateral dominance patterns affect reading achievement and motor performance. A second purpose of the study was to investigate the relationship between reading achievement and motor performance scores within selected lateral dominance patterns. A final purpose of the study was to determine the reliability of the selected test items for hand and eye dominance.

Procedure. Six hundred thirty-four third-grade students in the Richardson Independent School District, Richardson, Texas, served as subjects for the investigation.

Five tests to determine eye dominance and five tests to determine hand dominance were administered two times to each subject. A performance of seven or more responses out of ten trials with the same hand or eye classified the subject as being dominant in that hand or eye. Subjects who failed to use the same hand or eye seven out of ten responses were classified as ambi-eyed or ambi-handed and were rejected from the study. Based on the responses to the dominance testing, subjects were classified as right-hand, right-eye; right-hand, left-eye; left-hand, left-eye; and left-hand, right-eye.

For the assessment of reading achievement, the *Comprehensive Tests of Basic Skills,* Level 1, Form S, was selected for use and administered to all subjects. The total scale score, which was the combined standard score of the forty-item reading vocabulary test and the forty-five item reading comprehension test, was selected to represent reading achievement.

To assess motor performance, the *Bruininks-Oseretsky Test of Motor Proficiency,* Short Form, was administered. The standard score for each subject on the fourteen-item test was used to represent the motor performance of the subject.

Findings. Analysis of variance tests applied among the data demonstrated that there was no significant difference in motor performance or reading achievement among the four lateral dominance patterns. Pearson's product-moment correlation tests demonstrated that within the right-hand, left-eye dominance pattern, motor performance and reading achievement were significantly related.

Conclusions. After statistical analyses, the following conclusions were established: (1) Lateral dominance patterns have no significant effect upon motor proficiency. (2) Lateral dominance patterns have no significant effect upon reading achievement. (3) The significant correlation between reading achievement and motor performance tends to substantiate the need for more perceptual-motor activities and other learning experiences that teach and reinforce specific academic objectives through movement. (4) Two trials by each subject on the five test items for hand and eye dominance are sufficient for gaining a reliable dominance response. (5) The reliability of responses to the shot-tube test for hand dominance will diminish as the number of trials increases beyond two trials. (6) The reliability of responses to the card-hole and card-ring tests for eye dominance will diminish as the number of trials increases beyond two trials. (7) The hammer and scissors tests were the most reliable measures of handedness. (8) The kaleidoscope and manoptoscope tests for eye dominance were the most reliable measures of eyedness. (9) The thread-a-bead test for hand dominance is more reliable if the bead is affixed to a stand, thus requiring the involvement of only one hand. (10) Measurements of handedness, as a whole, are more reliable than tests of eyedness.

SELF-CONCEPT THEORY: A CORRELATIONAL STUDY OF ACADEMIC SELF-CONCEPT, INTELLECTUAL ACHIEVEMENT RESPONSIBILITY, SOCIAL COGNITION, AND READING ACHIEVEMENT FOR A SAMPLE OF UPPER ELEMENTARY SCHOOL CHILDREN

TAYLOR, LOUISE KATHLEEN, PH.D. *University of Southern California,* 1980. Chairman: Professor William B. Michael

Problem. Formulated within a conceptual framework for self-concept based on Snygg and Combs' theories, three major purposes of this investigation were to determine for a total sample of 105 elementary school children in a small, middle-class school district (a) interrelationships among a standardized test of reading achievement (RDG) and a measure of each of four affective constructs: academic self-concept (ASC), intellectual achievement responsibility (IAR) reflecting locus of control, social cognition (SCOG), and the interaction of IAR and SCOG (INTR), (b) degree of relationship between the RDG measure and optimally weighted composites of chronological age (AGE) as a control variable and all four affective measures or of AGE and specific subsets of these measures, and (c) extent of association of the ASC measure with a composite of AGE and either the remaining three affective variables or subsets of them. Information provided could offer important guidance for developing educational programs in affective domains.

Measures. To represent RDG, the 1973 Comprehensive Tests of Basic Skills (Form S, Level 2) Total Reading Score was employed. To portray ASC, scores on five scales of Michael and Smith's 1976 Dimensions of Self-Concept test were summed. The Intellectual Achievement Responsibility scale released in 1965 by Crandall and co-workers measured IAR. Scores on individually administered district-made subtests reflecting Guilford's structure-of-intellect (SOI) factors CBU (Cognition of Behavioral Units), CBC (Cognition of Behavioral Classes), CBR (Cognition of Behavioral Relations), and CBS (Cognition of Behavioral Systems) were totalled to yield the SCOG measure. Finally, the contrived INTR variable was constructed through computer generation.

Statistical procedures. Besides calculation of both zero-order product moment correlation coefficients and first-order (partial) correlation coefficients to control for age, stepwise multiple regression analyses were completed including those of double cross-validation with randomly chosen halves (subsamples) of the total sample.

Findings. The major statistical outcomes were as follows: (1) Zero-order correlation coefficients of the RDG test with the ASC, IAR, SCOG, and INTR measures were .30, .32, .62, and .58, respectively (all $p < .001$); correspondingly, partial correlation coefficients (AGE being controlled) were .31 ($p < .001$), .25 ($p < .05$), .50 ($p < .001$), and .47 ($p < .001$). (2) Multiple correlation coefficients (R's) between the RDG measure and optimally weighted composites of AGE, ASC, IAR, SCOG, and INTR; of AGE and ASC; of AGE, SCOG, and ASC; and of AGE, ASC, IAR, and SCOG predictor variables were .717, .600, .705, and .711, respectively — the .717 value being significantly larger than any zero-order correlation coefficient. (3) In double cross-validation analysis with the AGE, ASC, IAR, SCOG, and INTR predictor composite, R's of .678 and .659 for initial subsamples did not differ significantly from those of .764 and .654 for follow-up subsamples (all $p < .001$). (4) Nonsignificant R's between ASC and predictor composites of AGE and SCOG; of AGE, IAR, and SCOG; and of AGE, IAR, SCOG, and INTR measures were .221, .222, and .222, respectively (all $p > .05$)

Conclusions. The following conclusions emerged from data analyses: (1) Validity of multiple prediction of reading performance appears to be enhanced from use of social cognition and academic self-concept measures. (2) Prediction of standing on an academic self-concept test does not seem to be facilitated from use of measures of other affective constructs studied. (3) Empirical support for Snygg and Combs' theoretical framework as adapted and defined in this investigation is equivocal.

Recommendations. These recommendations are offered: (1) Experimental investigations should be initiated to determine whether systematic educational efforts to enhance academic self-concept and social cognition skills are associated with gains in academic performance. (2) Construct validation studies of the measures used are needed.

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN PREADOLESCENTS' LEVELS OF READING COMPREHENSION AS DEFINED BY BARRETT'S TAXONOMY AND THEIR EXISTING LEVELS OF MORAL DEVELOPMENT AS DEFINED BY KOHLBERG'S STAGES OF MORAL DEVELOPMENT

Order No. 8010107

VALENTINO, BETH ANNE M., PH.D. *The Pennsylvania State University*, 1979. 178pp. Adviser: Lester S. Golub

This study evolved from an initial interest in the cognitive similarities observed throughout the hierarchical organization of Thomas C. Barrett's Taxonomy of Reading Comprehension and the moral stages sequence of Lawrence Kohlberg. The cognitive-developmental approach to moral development provided the theoretical bases for the investigation of the skills of reading comprehension and the reasoning processes necessary for making moral judgments. A basic assumption of the cognitive-developmental approach to moral maturity was utilized in the study. Once moral stages and level of reading comprehension were assessed, presentation of material one stage higher than the existing stage might therefore cause conflict so that an individual would then advance to the next stage. The use of literature to enhance moral development and simultaneously strengthen reading comprehension skills became the basic premise of the investigation. The Tests of Levels of Reading Comprehension was designed by the researcher to determine specific levels (Literal, Inferential, and Evaluative) of comprehension through a criterion-referenced format. The Kohlberg Moral Judgment Interview was utilized as the assessment tool for designation of existing moral stages. To determine general academic ability, the Otis-Lennon Mental Ability Test was administered.

The study hypothesized that a significant positive relationship would be found between levels of reading comprehension and stages of moral development with general academic ability held constant. It was also proposed that a positive significant relationship would exist between general academic ability and levels of reading comprehension and between general academic ability and levels of moral development. In addition, this study hypothesized that females would achieve higher levels of moral maturity and reading comprehension than males.

Statistical analysis of the data included a first-order partial correlation coefficient to establish the relationship between moral development and reading comprehension with ability held constant. Pearson product-moment correlation coefficients were determined to describe relationships beween levels of reading comprehension and general academic ability, and levels of moral development and general academic ability. Pearson product-moment correlation coefficients were also established in the determination of relationships between sex and levels of reading comprehension and moral development. t tests were performed to test the significance of all the resultant correlation coefficients.

Conclusions showed that a significant positive correlation was found between preadolescents' levels of reading comprehension and their levels of moral development with general academic ability held constant, $p < .05$. Significant positive correlations were also found between levels of reading comprehension and general academic ability, $p < .05$, and between levels of moral development and general academic ability, $p < .05$. A low positive correlation was found between sex and levels of reading comprehension which was not significant, $p > .05$, but a significant positive correlation did result between levels of moral development and sex, $p < .05$.

The results of this study seem to indicate that some common element apart from general academic ability is operating when decisions are being made subsequent to reading, and when judgments are made concerning moral issues. Findings appear to indicate that the defense of a response through in-depth reasoning could be a factor in the relationship of reading comprehension and moral reasoning.

The study involves some curriculum implications which advocate the integration of a language arts and content area program with a moral developmental component, assuming a relationship exists between levels of moral reasoning and levels of reading comprehension. Additional research is needed in designing a practical moral stage assessment tool that teachers might utilize subsequent to a brief training period. Research is needed to test the effect of a reading program which incorporates moral development in comparison to one which does not stress decision-making skills. Experimentation with the presentation of reading material which correlates to an individual's moral reasoning stage and level of comprehension is advocated.

ANALYSIS OF THE RELATIONSHIP BETWEEN UPPER ELEMENTARY STUDENTS' SKILLS IN CLASSIFYING AND INFERRING AND THEIR ACHIEVEMENT IN READING COMPREHENSION AND VOCABULARY

Order No. 8005602

WHITSON, BETTY ANN, ED.D. *University of Houston*, 1979. 113pp. Chairperson: Dr. Jacob W. Blankenship

Purpose. The purpose of this study was threefold. First, the study was designed to ascertain whether there was a significant relationship between classifying and inferring skills and achievement in reading vocabulary and reading comprehension. Second, the investigator has determined if students from science magnet schools were significantly different from students in nonscience magnet schools on the reading vocabulary and comprehension variables. Third, the investigator has determined whether students from science magnet schools were significantly different from nonscience magnet schools on the classifying and inferring variables.

Procedures. Two hundred eleven students from fifth and sixth grades in five elementary schools participated in the study. The schools were chosen from various areas of a large metropolitan school system. Half the population were from schools where science was a focus of the magnet program, and the other half were from magnet schools which had a nonscience focus. The science magnet students received daily science instruction of an activity orientation from a science specialist. Non-science magnet students received one 40-minute lesson per week and materials were seldom used.

Findings. Classifying skills and reading vocabulary achievement were found to be significantly related. Classifying skills and reading comprehension achievement were found to be significantly related. Inferring skills and reading vocabulary achievement were found to be significantly related. Inferring skills and reading comprehension achievement were found to be significantly related.

The students from the science magnet schools were significantly different from the students in the nonscience magnet schools on the vocabulary variable, favoring science students. The students from the science magnet schools were significantly different from the students in the nonscience magnet schools on the reading comprehension variable, favoring science students. The students from the science magnet schools were significantly different from the students in the nonscience magnet schools on the inferring variable, favoring science. The students from the science magnet schools were significantly different from the students in the nonscience magnet schools on the classifying variable, favoring science students.

Conclusions. Significant relationships were found between classifying and inferring skills and achievement in reading vocabulary; and significant relationships were found between classifying and inferring skills and achievement in reading comprehension. Students from science magnet schools were found to be significantly different from students in nonscience magnet schools on the reading vocabulary, reading comprehension, classifying skills, and inferring skills variables. It was further concluded a major difference between the science population and nonscience population was achieved because of student interaction with material objects through science activities.

Recommendations. The science magnet students in this sample had higher scores in vocabulary and reading comprehension and received science activities daily; therefore, it is recommended that science activities be included daily.

The science magnet students participated in hands-on, science activities and were benefitted in reading achievement; therefore, it is recommended that teachers be required to teach hands-on, activity oriented science.

Research recommendations are: additional studies should be undertaken to determine the benefit science process skills have in other areas of the curriculum such as language arts, writing and social studies. Also, additional studies with the process skills of measuring, space/time, and observing need to be undertaken to determine their relative value to areas of basic skills.

THE RELATIONSHIP OF DISORDERS OF WORD-FINDING AND READING IN CHILDREN AND APHASICS Order No. 7927957

WOLF, MARYANNE, ED.D. *Harvard University*, 1979. 294pp.

In research with children with severe reading problems (Denckla, 1978), in work with aphasics (Goodglass & Kaplan, 1972; Luria, 1970), and in clinical and classroom observations (Bashir, 1978), researchers report a frequent, unexplained co-occurrence between anomia (word-finding or naming dysfunction) and reading breakdown. The dissertation investigates this phenomenon through two questions. (1) In naming, how does the individual find and retrieve words? (2) Can knowledge of the word-retrieval processes inform our understanding of reading and linguistic differences in children and aphasics?

Part I of the dissertation describes the construction of a model of word-finding and reading based on neurological, psycholinguistic, psychological, and reading research. This neurolinguistic model depicts a multi-component word-finding process that stretches from attention and perception through lexical retrieval and articulations and that intersects with reading.

Part II describes the research study that emerged from the model's hypotheses and asks three a priori questions and various process questions: (1) What is the strength of the relationship between word-finding and reading? (2) Will a battery of measures designed to tap various components in the word-retrieval model differentiate reading performance and age of development? (3) If they occur, will differences between groups appear developmental (i.e., similar growth slope, but one lagging), or distinctly different (thus supporting notions of neurological differences) (Denckla, 1978)? (4) What is the contribution to naming of (a) amount of perceptual information? (b) rate of processing? (c) word frequency? (d) type of cueing? (e) tacit knowledge of the word? (f) level of verbal fluency?

Method. A 45- to 60-minute battery of naming and reading measures was administered individually to 64 children (32 average and 32 poor readers) in three age groups (6-7, 8-9, and 10-11 years).

Results. (1) All naming measures correlated with all reading tests ($p < .001$), with more purely verbal measures) e.g., BNT), significant at $p < .00001$. (2) a) Average readers were significantly different from poor readers on every naming test ($p < .001$), except for the perceptual and R.A.N. numbers tests ($p < .01$; both tests less "purely" verbal); (b) age groups were significantly different from each other ($p < .001$) on every measure. (3) For average readers, differences in results (cross-sectional) between the age groups can be inferred to occur in orderly increments. Poor readers appear to make gains between 6 to 7 and 8 to 9 years, but results plateau between 8 to 9 and 10 to 11 years. The 10 to 11 year poor readers scored below the 6 to 7 year average readers on most tests.
(4) (a) Differences in perceptual information affected only a small group of poor readers. (b) Latency differences appeared more in older poor readers. (c) Word-frequency affected the naming of average but not poor readers, who named erratically. (d) All children used phonological cues more successfully. (e) No differences in tacit knowledge of words differentiated reading groups. (f) Poor readers were dramatically deficient in verbal fluency measures.

Implications. The chief findings are two: (1) a strong reading/word-retrieval relationship; (2) great differences exist in the retrieval processes between poor and average readers. The cross-sectional results suggest qualitative differences between reading groups and developmental differences between ages,-findings important for clinical evaluation, educational practice, and theory in applied linguistics.

The battery is uniquely suited to tap the tacit linguistic knowledge of difficult-to-assess groups and to illumine undetected problems in "not-up-to-potential" children. The phonological measure offers swift corroboration: the BNT embodies a range of operations.

Theoretical implications include a neurolinguistic account of the reading process, support for a polyetiological view of reading disorders, and a multi-step description of the substructures of naming in children and aphasics.

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